

Zener Diode



RoHS
Compliant



Features

- Planar Die construction
- 500mW Power Dissipation
- Ideally Suited for Automated Assembly Processes

Mechanical Data

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Approx. Weight: 0.009 grams

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristics	Symbol	Values	Unit
Max. Forward Voltage @ $I_F = 10\text{mA}$	V_F	0.9	V
Junction Temperature (Note 1)	$P_{(AV)}$	500	mW
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Note:

1. Mounted on 5mm^2 (0.013mm thick) land areas

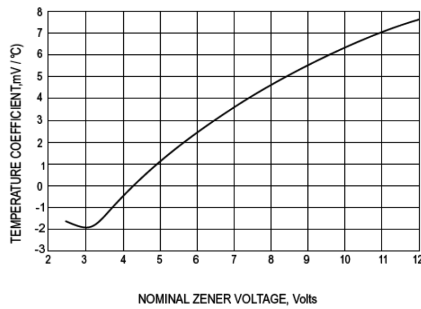
Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Part Number	Marking	Normal Zener Voltage	Test Current	Max. Zener Impedance		Max. Reverse Leakage Current		Max. Zener Voltage Temp.
		Vz@Izt	Izt	Zzt@Izt@Izk=0.25mA		IR@VR		
		Volts	mA	Ω	Ω	μA	Volts	
MMSZ5232B+	E2	5.6	20	11	1600	5	3	+0.038
MMSZ5234B+	E4	6.2	20	7	1000	5	4	+0.045
MMSZ5236B+	F1	7.5	20	6	500	3	6	+0.058
MMSZ5237B+	F2	8.2	20	8	500	3	6.5	+0.062
MMSZ5242B+	H2	12	20	30	600	1	9.1	+0.077
MMSZ5248B+	J3	18	7	21	600	0.1	14	+0.085
MMSZ5252B+	K2	24	5.2	33	600	0.1	18	+0.088

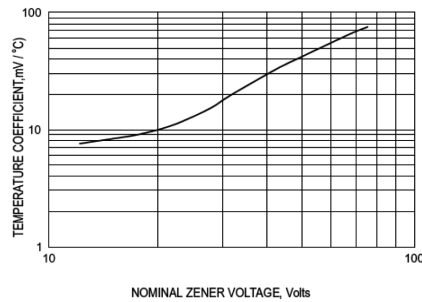
Note:

1. Standard Zener voltage tolerance is $\pm 5\%$ with a "B" suffix (e.g.: MMSZ5225B)
2. Specials Available Include:
 - A. Nominal zener voltages between the voltages shown and tighter voltage tolerances.
 - B. Matched sets.
3. Zener Voltage (V_Z) Measurement. Guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature (T_L) at 30°C , from the diode body.
4. Zener Impedance (Z_Z) Derivation. The zener impedance is derived from the 60 cycle ac voltage, which results when an AC current having an rms value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK} .
5. Surge Current (I_R) Non-Repetitive. The rating listed in the electrical characteristics table is maximum peak, non-repetitive, reverse surge current of 1/2 square wave or equivalent sine wave pulse of 1/120 second duration superimposed on the test current, I_{ZT} , per JEDEC registration.

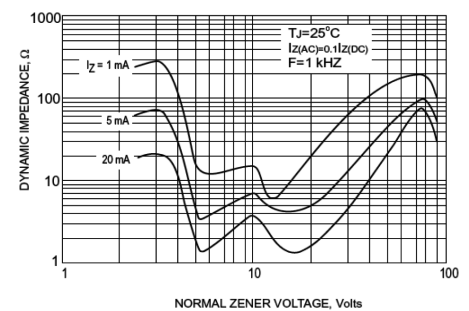
Rating and Characteristic Curves



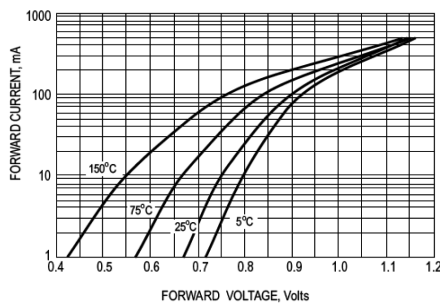
Typical Reverse Current



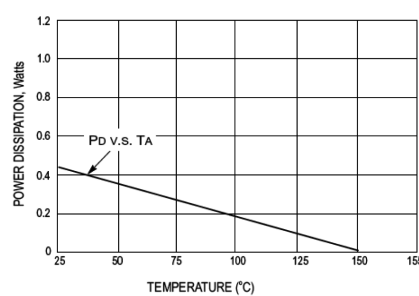
Steady State Power Derating



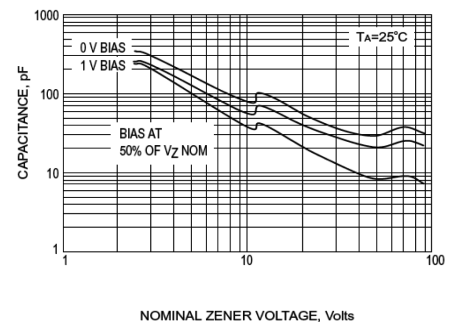
Effect of Zener Voltage on Zener Impedance



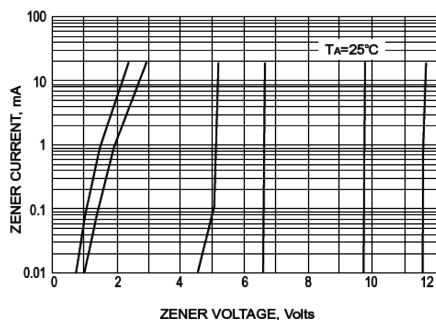
Typical Forward Voltage



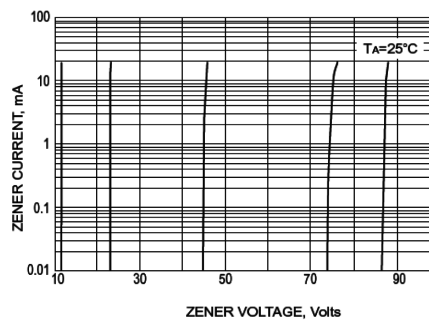
Steady State Power Derating



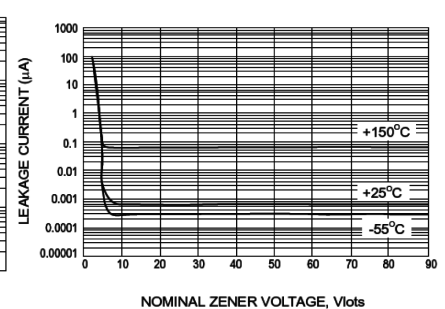
Typical Capacitance



Zener Voltage Vs. Zener Current



Zener Voltage Vs. Zener Current



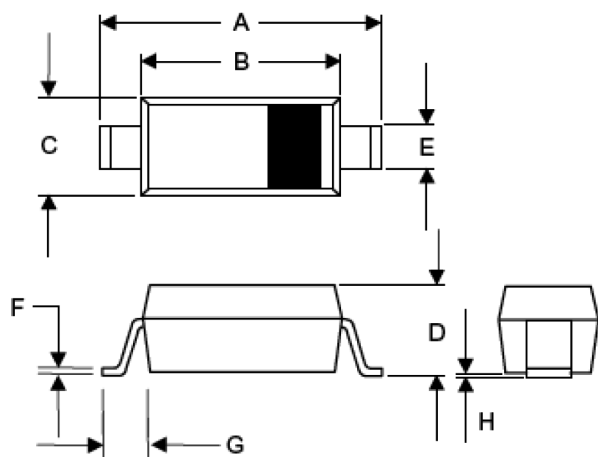
Typical Leakage Current

Zener Diode



Dimensions:

SOD-123



Dimensions				
Dim.	Inches		mm	
	Min.	Max.	Min.	Max.
A	0.141	0.154	3.6	3.9
B	0.098	0.11	2.5	2.8
C	0.055	0.071	1.4	1.8
D	0.037	0.053	0.95	1.35
E	0.019	0.028	0.5	0.7
F	-	0.008	-	0.2
G	0.016	-	0.4	-
H	-	0.005	-	0.12

Part Number Table

Description	Part Number
Zener Diode, 500mW 5.6V SOD-123	MMSZ5232B+
Zener Diode, 500mW 6.2V SOD-123	MMSZ5234B+
Zener Diode, 500mW 7.5V SOD-123	MMSZ5236B+
Zener Diode, 500mW 8.2V SOD-123	MMSZ5237B+
Zener Diode, 500mW 12V SOD-123	MMSZ5242B+
Zener Diode, 500mW 18V SOD-123	MMSZ5248B+
Zener Diode, 500mW 24V SOD-123	MMSZ5252B+

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